



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,206	07/03/2006	Yuuichi Aoki	Q95825	9584
23373 7590 07/22/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER WONG, ALAN				
ART UNIT 2817		PAPER NUMBER		
MAIL DATE 07/22/2009		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/585,206

Applicant(s)

AOKI, YUICHI

Examiner

ALAN WONG

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6 and 21-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-6 and 22-30 is/are allowed.
- 6) ☒ Claim(s) 21 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected because Fig 7, 8, 10-16, 18-23 do not have the label "Prior Art". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. For Figure 7, 8, 10-16, they are disclosed in the technical field section of the specification and describe the operation of first, second, third conventional amplifiers; and for Figure 18-23, they described relations of second conventional amplifier (Brief description of the drawings). It is unclear to the examiner if the abovementioned figures are prior art since the wording "conventional art" gives the suggestion of prior art for the

figures. In a remark filed on 3/27/2008, Applicant has stated all other figures (aside from Fig. 1-6, 9, and 17) are **NOT** prior art but did not provide reason/explanation why the above mentioned figures 7, 8, 10-16, 18-23 are not prior art. Please clarify.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 21, 31-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 21, line 4 recites the limitation "the reference voltage terminal". There is insufficient antecedent basis for this limitation in the claim as it is not previously defined in this instantaneous claim or in its dependency from parent claim 3 or 4. Note that there is no error as to this limitation's dependency on claim 5 or 6. A suggested solution is delete claim 3 and 4 from the multiple claim dependency of claim 21.

6. Claim 31, line 3 recites the limitation "said first impedance element". There is insufficient antecedent basis for this limitation in the claim as it is not previously defined in this instantaneous claim or in its dependency from parent claim 26 or 27. Note that there is no error as to this limitation's dependency on claim 29 or 30. A suggested solution is delete claim 26 and 27 from the multiple claim dependency of claim 31.

7. Claim 32, line 4 recites the limitation "the bias power supply". There is insufficient antecedent basis for this limitation in the claim as it is not previously defined in this instantaneous claim or in its dependency from parent claim 26, 27, or 29. Note

that there is no error as to this limitation's dependency on claim 30. A suggested solution is delete claim 26, 27, 29 from the multiple claim dependency of claim 32.

8. Claim 32, line 4 recites the limitation "said first impedance element". There is insufficient antecedent basis for this limitation in the claim as it is not previously defined in this instantaneous claim or in its dependency from parent claim 26 or 27. Note that there is no error as to this limitation's dependency on claim 29 or 30. A suggested solution is delete claim 26 and 27 from the multiple claim dependency of claim 32.

9. Claim 32, line 5 recites the limitation "the reference voltage terminal". There is insufficient antecedent basis for this limitation in the claim as it is not previously defined in this instantaneous claim or in its dependency from parent claim 26 or 27. Note that there is no error as to this limitation's dependency on claim 29 or 30. A suggested solution is delete claim 26 and 27 from the multiple claim dependency of claim 32.

10. Claim 33 and 34 recite "**said** amplifier circuit", "**the** mechanism for compressing **the** amplitude", and "**the** input" which all lack antecedent basis as they are not defined in this instantaneous claim or in their dependency from any of the parent claims (26, 27, 29, 30). Note that an explanation (pointing to figures and specifications) would be required to explain the claims if the correction to this rejection is simply changing "said" or "the" to --a-- or --an--.

Claim Objections

11. Claim 2 is objected to because of the following informalities: Applicant appears to try to claim that the mechanism only compress larger instantaneous value and **not** smaller instantaneous value. However, the "**with respect to**" part does not further limit

the claim as it does not prevent smaller instantaneous value from being compressed as well.

12. Appropriate correction is required.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Dening et al. US 6,369,656 of record.

15. Dening et al. disclose an amplifier as discussed on office action mailed on 12/24/2008. Regarding the amendment, Dening et al. disclose a mechanism (Fig. 2 item C1) which compresses ("compress" is view as becoming smaller or eliminated/reduced) a larger instantaneous value with respect to a smaller instantaneous value of an amplitude provided as an input to said amplifier (larger value of DC/low frequency signal would be "compress" or eliminated/reduced by the inherent DC blocking function of capacitor C1).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dening et al. US 6,369,656.

18. With respect to claim 25, Dening et al. disclose amplifier as discussed on office action mailed 12/24/2008 and disclose a mechanism (Fig. 2 item C1) which compresses (see above on "compress") larger instantaneous value, with respect to a smaller instantaneous value, of an amplitude (see similar rejection above).

Response to Amendment/Arguments

19. Applicant's amendments/arguments filed 3/24/2009 have been fully considered but they are not persuasive.

20. Applicant states correctly that capacitor C1 of Dening implement a certain function (DC blocking, which is "compressing" for DC or low frequency signal) regardless of whether a large instantaneous value of amplitude or small instantaneous value of amplitude is supplied as input.

21. Applicant states "according to the system of Dening, since a basic wave is in phase with an IM3 signal, the claimed compression cannot be obtained" (Page 3 of remark). Applicant never states how basic wave is in phase with an IM3 signal would make compression unable to be obtained and appears to attempt to suggest the large/small instantaneous value of amplitude would affect compression based on the discussion on page 3 of the remark.

22. Examiner disagrees. "Compression" is still obtained, at least on DC/low frequency signal, on **large and small** instantaneous of amplitude. The claim language on "a mechanism which compresses a larger instantaneous value, **with respect to a**

smaller instantaneous value, of an amplitude provided as an input to said amplifier" does not prevent the mechanism from compressing smaller instantaneous value.

Therefore, Examiner believes the rejection stands.

23. A proposed change to claim to clarify would be --a mechanism which compresses **only** a larger instantaneous value of an amplitude provided as an input to said amplifier-- to clearly distinguish the intent of the "compressing".

Allowable Subject Matter

24. Claim 3-6, 22-30 allowed.

25. Claim 21, 31-34 are would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

26. Since the allowability of some of the claims is withdrawn, this action is made Non-Final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN WONG whose telephone number is (571)272-3238. The examiner can normally be reached on Mon-Thurs 9:30am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bob Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/BENNY LEE/
PRIMARY EXAMINER
ART UNIT 2817**

AW